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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,828	12/08/2000	Jari Mannerman	460-009988-US(PAR)	3561

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EXAMINER

BURD, KEVIN MICHAEL

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/732,828

Applicant(s)

MANNERMAA, JARI

Examiner

Kevin M. Burd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33 and 34 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-16 and 20-32 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 17-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. This office action, in response to the amendment filed 3/23/2006, is a final office action.

Response to Amendment

2. The previous objection to the abstract is withdrawn.

3. In response to applicant's argument that Hughes (US 4,905,204) is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hughes discloses means for utilizing an effective means for computing the forward and inverse Discrete Fourier Transforms as stated in column 18, line 64 to column 19, line 2.

4. Applicant states the combination of references does not teach the claimed feature of forming at least two sample vectors. However, Ma discloses the sampled signal produced in element 14 is continuous for a given time creating a plurality of sampled segments that total the sampled signal. In addition, programmable filter 16 shows two sampled output signals being input to memory signal block 20. For these reasons and the reasons stated in the previous office action, the rejections of the claims are maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7-16 and 20-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al (US 4,998,111) with Kudhrethaya et al (US 6,606,349) in view of Hughes (US 4,905,204).

Regarding claims 1-3, 7-16 and 20-32, Ma discloses a method for performing synchronization in a GPS receiver (abstract). A reference code is used to recover the frequency shift of the received signal and the code phase (figure 1, element 26). Samples are taken of the received signal (element 14). The sampled signal produced in element 14 is continuous for a given time creating a plurality of sampled segments that total the sampled signal. A first Fast Fourier transform (FFT) is formed based on the reference code (element 28). A second FFT is formed based on the sampled received signal (element 22). The outputs of the FFTs are multiplied (element 30) and input in an inverse FFT (IFFT) (element 32). The IFFT outputs the correlation function between the reference signals and the input RF signal (column 3, lines 47-50). The phase and frequency shift is determined by the correlation result. Ma discloses additional information in column 3, lines 14-61. Ma does not disclose receiving a code-modulated spread spectrum signal. However, Ma discloses receiving signals in a GPS receiver. Kudhrethaya discloses "The Global Positioning System uses spread spectrum

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technology to convey its data to ground units. The use of spread spectrum is especially advantageous in the GPS systems. Spread spectrum technology enables GPS receivers to operate on a single frequency, thus saving the additional electronics needed to switch and tune other bands if multiple frequencies were used. Spread spectrum also can minimize the power consumption requirements of the GPS system, for example, to require 50 watts or less and tolerate substantial interference.” (column 3, line 61 to column 4, line 3). Therefore, it is inherent, the GPS system of Ma receives code modulated spread spectrum as stated by Kudhrehaya. Ma does not disclose using Fast Hartley transforms in place of the FFTs described.

Hughes discloses FFT procedures can each be alternatively performed by using a Fast Hartley Transform (FHT) procedure instead of the FFT since the FHT provides an effective means for computing the forward and inverse Discrete Fourier Transforms (column 18, line 64 to column 19, lines 2). It would have been obvious for one of ordinary skill in the art at the time of the invention to substitute the FFT for the FHT as taught by Hughes into the GPS method and system of Ma for the reason stated above.

Allowable Subject Matter

6. Claims 4-6 and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 33 and 34 are allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin M. Burd
5/30/2006


KEVIN BURD
PRIMARY EXAMINER